

Nov-15-04 02:13pm From:H B S R

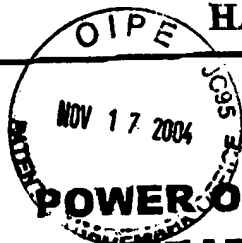
Inc.

+878-341-0136

T-870 P.002

F-118

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

**POWER OF ATTORNEY OR
AUTHORIZATION OF AGENT AND
CORRESPONDENCE ADDRESS**

Application Number	10/813,904
Filing Date	March 31, 2004
First Named Inventor	Iain H. Kalfas
Confirmation Number	5037
Group Art Unit	3743
Examiner Name	
Attorney Docket Number	3518.1023-000

Title HEAD-TO-HEAD CONNECTOR SIGNAL FIXATION SYSTEM

I/We hereby appoint

☒ the attorneys/agents associated with Customer No. 021005☐ Practitioner(s) named below:

as my/our attorneys/agents to prosecute the application identified above, including any continuation or divisional applications thereof, and to transact all business in the United States Patent and Trademark Office connected therewith.

The correspondence address for the above-identified application is:

☒ Customer Number 021005

Hamilton, Brook, Smith & Reynolds, P.C.

530 Virginia Road

P.O. Box 9133

Concord, Massachusetts 01742-9133

☐ Other

Please direct all telephone calls and facsimiles to:

Name N. Scott Pierce

Tel. No.

978-341-0036

Fax No.

978-341-0136

I am the:

☐ Applicant/Inventor.☒ Authorized representative of the Assignee, DePuy Spine, Inc., of the entire interest. See 37 C.F.R. § 3.71. A Statement under 37 C.F.R. § 3.73(b) is enclosed.☐ Authorized representative of the Assignee, [], together with [], of the entire interest. A Statement under 37 C.F.R. § 3.73(b) is enclosed.

SIGNATURE of Applicant or Assignee of Record

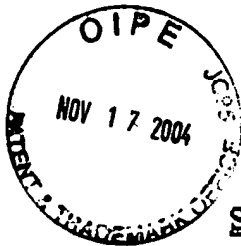
Name & Title

David A. LANE, Assistant Secretary

Signature

Date

11/15/04



Docket No. 3518.1023-000

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Inventor(s): Iain H. Kalfas, Carl Laurysen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones,

David Konieczynski and Raymond E. Murphy

Application No./Patent No.: 10/813,904 Filed/Issue Date: March 31, 2004

For: HEAD-TO-HEAD CONNECTOR SPINAL FIXATION SYSTEM

DePuy Spine, Inc., a Corporation

(Name of Assignee)

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☒ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☐ an assignee together with [] of the entire right, title and interest in the patent application identified above.

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A. ☒ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel _____, Frame _____, or a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or a copy thereof is attached.
2. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or a copy thereof is attached.
3. From: _____ To: _____
The document was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Date: 11/15/04

Name: DAVID LANE

Title: Assistant Secretary

Signature: David Lane

JointASSIGNMENT

WHEREAS, we, **Iain H. Kalfas, Carl Lauryssen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones, David Konieczynski, and Raymond F. Murphy**, have invented a certain improvement in **Head-to-Head Connector Spinal Fixation System** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office (*use for utility (37 CFR § 1.53(b)) and design filings only*);
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **10/813,904**, filed **March 31, 2004**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. [], which designates the United States of America;
- ☐ which was patented under United States Patent No. [].

WHEREAS, **DePuy Spine, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Ohio**, and having a usual place of business at **325 Paramount Drive, Raynham, Massachusetts 02767-0350** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: _____
Iain H. Kalfas

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Iain H. Kalfas**,

☐ personally known to me, or
☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) _____ Notary Public

(print name)
My Commission expires ____/____/____

Inventor's Signature: _____

Carl Lauryssen

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Carl Lauryssen**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

_____ to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Steven Ludwig

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Steven Ludwig**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

_____ to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Michael O'Brien

State/Commonwealth

of ILLINOIS

County of COOK

On this 12 day of NOVEMBER, 2004, before me, the undersigned notary public, personally appeared Michael O'Brien,

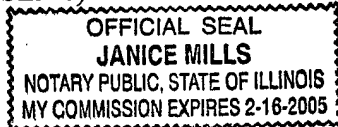
☒ personally known to me, or

☒ proved to me through satisfactory evidence of identification, which was

FLORIDA DRIVER LICENSE # 0165-546-54-214-0

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)



Janice Mills
JANICE MILLS

Notary Public

(print name)

My Commission expires 02 / 16 / 2005

Inventor's Signature: _____

Thomas Doherty

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared Thomas Doherty,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____ / ____ / ____

Inventor's Signature: _____

Mark T. Hall

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Mark T. Hall**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Bryan S. Jones

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Bryan S. Jones**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

David Konieczynski

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **David Konieczynski**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

_____ to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Raymond F. Murphy

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Raymond F. Murphy**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

_____ to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

JointASSIGNMENT

WHEREAS, we, **Iain H. Kalfas, Carl Laurysen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones, David Konieczynski, and Raymond F. Murphy**, have invented a certain improvement in **Head-to-Head Connector Spinal Fixation System** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office *(use for utility (37 CFR § 1.53(b)) and design filings only)*;
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **10/813,904**, filed **March 31, 2004**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. ☐, which designates the United States of America;
- ☐ which was patented under United States Patent No. ☐.

WHEREAS, **DePuy Spine, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Ohio**, and having a usual place of business at **325 Paramount Drive, Raynham, Massachusetts 02767-0350** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: _____

Iain H. Kalfas
Iain H. Kalfas

State/Commonwealth

of _____

County of _____

On this 14th day of October, 2004, before me, the undersigned notary public, personally appeared **Iain H. Kalfas**,



personally known to me, or



proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Patricia Miklowski Notary Public

PATRICIA MIKLOWSKI (print name)

My Commission expires 12/14/04

PATRICIA MIKLOWSKI

Notary Public, State of Ohio, Cuy. Cty.
My Commission Expires Dec. 14, 2004

Inventor's Signature: _____

Carl Lauryssen

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Carl Lauryssen**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Steven Ludwig

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Steven Ludwig**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Michael O'Brien

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Michael O'Brien**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Thomas Doherty

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Thomas Doherty**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____
Mark T. Hall

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned
notary public, personally appeared **Mark T. Hall**,

- ☐ personally known to me, or
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) _____ Notary Public

(print name)
My Commission expires ____/____/____

Inventor's Signature: _____
Bryan S. Jones

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned
notary public, personally appeared **Bryan S. Jones**,

- ☐ personally known to me, or
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) _____ Notary Public

(print name)
My Commission expires ____/____/____

Inventor's Signature: _____

David Konieczynski

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **David Konieczynski**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Raymond F. Murphy

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Raymond F. Murphy**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

JointASSIGNMENT

WHEREAS, we, **Iain H. Kalfas, Carl Laurysen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones, David Konieczynski, and Raymond F. Murphy**, have invented a certain improvement in **Head-to-Head Connector Spinal Fixation System** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office (*use for utility (37 CFR § 1.53(b)) and design filings only*);
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **10/813,904**, filed **March 31, 2004**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. [], which designates the United States of America;
- ☐ which was patented under United States Patent No. [].

WHEREAS, **DePuy Spine, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Ohio**, and having a usual place of business at **325 Paramount Drive, Raynham, Massachusetts 02767-0350** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: _____

Iain H. Kalfas

State/Commonwealth _____

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Iain H. Kalfas**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Carl Lauryssen

State/Commonwealth

of California

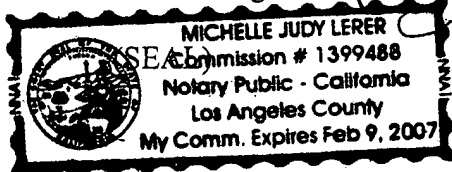
County of Los Angeles

On this 15 day of October, 2004, before me, the undersigned notary public, personally appeared **Carl Lauryssen**,

☒ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.



Michelle Judy Lerer Notary Public

Michelle Judy Lerer (print name)

My Commission expires 2/9/2007

Inventor's Signature: _____

Steven Ludwig

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Steven Ludwig**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Michael O'Brien

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Michael O'Brien**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Thomas Doherty

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Thomas Doherty**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Mark T. Hall

State/Commonwealth _____

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Mark T. Hall**,

☐

personally known to me, or

☐

proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Bryan S. Jones

State/Commonwealth _____

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Bryan S. Jones**,

☐

personally known to me, or

☐

proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

David Konieczynski

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **David Konieczynski**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Raymond F. Murphy

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Raymond F. Murphy**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

JointASSIGNMENT

WHEREAS, we, **Iain H. Kalfas, Carl Lauryssen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones, David Konieczynski, and Raymond F. Murphy**, have invented a certain improvement in **Head-to-Head Connector Spinal Fixation System** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office *(use for utility (37 CFR § 1.53(b)) and design filings only)*;
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **10/813,904**, filed **March 31, 2004**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. [], which designates the United States of America;
- ☐ which was patented under United States Patent No. [].

WHEREAS, **DePuy Spine, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Ohio**, and having a usual place of business at **325 Paramount Drive, Raynham, Massachusetts 02767-0350** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: _____

Iain H. Kalfas

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Iain H. Kalfas**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Carl Lauryssen

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Carl Lauryssen**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Steven Ludwig

State/Commonwealth

of Maryland

County of Baltimore City

On this 2nd day of November, 2004, before me, the undersigned notary public, personally appeared **Steven Ludwig**,

☒ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Elizabeth J. Altieri Notary Public

Elizabeth J. Altieri (print name)

My Commission expires 4/12/05

Inventor's Signature: _____

Michael O'Brien

State/Commonwealth _____

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Michael O'Brien**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Thomas Doherty

State/Commonwealth _____

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Thomas Doherty**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Mark T. Hall

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Mark T. Hall**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Bryan S. Jones

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Bryan S. Jones**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

David Konieczynski

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **David Konieczynski**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

_____ to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Raymond F. Murphy

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Raymond F. Murphy**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

_____ to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Joint

ASSIGNMENT

WHEREAS, we, **Iain H. Kalfas, Carl Lauryssen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones, David Konieczynski, and Raymond F. Murphy**, have invented a certain improvement in **Head-to-Head Connector Spinal Fixation System** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office (*use for utility (37 CFR § 1.53(b)) and design filings only*);
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **10/813,904**, filed **March 31, 2004**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. ☐ , which designates the United States of America;
- ☐ which was patented under United States Patent No. ☐ .

WHEREAS, **DePuy Spine, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Ohio**, and having a usual place of business at **325 Paramount Drive, Raynham, Massachusetts 02767-0350** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application; together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: _____

Iain H. Kalfas

State/Commonwealth _____

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Iain H. Kalfas**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Carl Lauryssen

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Carl Lauryssen**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Steven Ludwig

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Steven Ludwig**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Michael O'Brien

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Michael O'Brien**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Thomas Doherty

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Thomas Doherty**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____
Mark T. Hall

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned
notary public, personally appeared **Mark T. Hall**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: Bryan S. Jones 11/2/04
Bryan S. Jones

State/Commonwealth
of Massachusetts
County of Bristol

On this 2nd day of November, 2004, before me, the undersigned
notary public, personally appeared **Bryan S. Jones**,

☒ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Amy Schick Notary Public

Amy Schick (print name)

My Commission expires 1/21/2011

Inventor's Signature: _____

David Konieczynski

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **David Konieczynski**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Raymond F. Murphy

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Raymond F. Murphy**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

JointASSIGNMENT

WHEREAS, we, **Iain H. Kalfas, Carl Lauryssen, Steven Ludwig, Michael O'Brien, Thomas Doherty, Mark T. Hall, Bryan S. Jones, David Konieczynski, and Raymond F. Murphy**, have invented a certain improvement in **Head-to-Head Connector Spinal Fixation System** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office *(use for utility (37 CFR § 1.53(b)) and design filings only)*;
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **10/813,904**, filed **March 31, 2004**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. ☐, which designates the United States of America;
- ☐ which was patented under United States Patent No. ☐.

WHEREAS, **DePuy Spine, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Ohio**, and having a usual place of business at **325 Paramount Drive, Raynham, Massachusetts 02767-0350** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: _____
Iain H. Kalfas

State/Commonwealth _____
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Iain H. Kalfas**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) _____ Notary Public

(print name)
My Commission expires ____/____/____

Inventor's Signature: _____

Carl Lauryssen

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Carl Lauryssen**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____

Steven Ludwig

State/Commonwealth

of _____

County of _____

On this _____ day of _____, 20____, before me, the undersigned notary public, personally appeared **Steven Ludwig**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: _____
Michael O'Brien

State/Commonwealth
of _____
County of _____

On this _____ day of _____, 20____, before me, the undersigned
notary public, personally appeared **Michael O'Brien**,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) _____ Notary Public

(print name)

My Commission expires ____/____/____

Inventor's Signature: Thomas Doherty 10/5/04
Thomas Doherty

State/Commonwealth
of Massachusetts
County of Bristol

On this 5th day of October, 2004, before me, the undersigned
notary public, personally appeared **Thomas Doherty**,

☒ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) Amy Schick Notary Public

Amy Schick (print name)

My Commission expires 1/21/2011

Inventor's Signature: _____

Mark T. Hall

State/Commonwealth

of Massachusetts

County of Bristol

On this 5th day of October, 2004, before me, the undersigned notary public, personally appeared **Mark T. Hall**,

☐ personally known to me, or

☒ proved to me through satisfactory evidence of identification, which was driver's license

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Patricia A. Hubler Notary Public

Patricia A. Hubler (print name)

My Commission expires 08/09/2007

Inventor's Signature: _____

Bryan S. Jones

State/Commonwealth

of Massachusetts

County of Bristol

On this 5th day of October, 20____, before me, the undersigned notary public, personally appeared **Bryan S. Jones**,

☒ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Amy Schick Notary Public

Amy Schick (print name)

My Commission expires 11/21/2011

Inventor's Signature: _____

David Konieczynski

10/6/04

State/Commonwealth

of Massachusetts

County of Bristol

On this 6th day of October, 2004, before me, the undersigned notary public, personally appeared **David Konieczynski**,

☐ personally known to me, or

☒ proved to me through satisfactory evidence of identification, which was driver's license

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Patricia Hubler

Notary Public

Patricia Hubler

(print name)

My Commission expires 08/09/2007

Inventor's Signature: _____

Raymond F. Murphy

10/5/04

State/Commonwealth

of Massachusetts

County of Bristol

On this 5th day of October, 2004, before me, the undersigned notary public, personally appeared **Raymond F. Murphy**,

☒ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was _____

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Amy Schick

Notary Public

Amy Schick

(print name)

My Commission expires 1/21/2011